Daniel Martí Casanova - **Video Game Programmer**

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Passionate game programmer with 3+ years of experience working on various small games. Adept in various aspects of game development and design. Self-motivated, with a good track record of working well with others. Spanish and Catalan native speaker and proficient in English (C1).

SKILLS

- Programming languages: C++ (3 years), C# (2 years), Python (1 year), Javascript (1 year).
- Software: Unity, Unreal Engine, Visual Studio, Blender, Photoshop.
- Physics programming: collisions, rigid body and soft body dynamics, spatial hashing.
- Gameplay programming: implementation of gameplay systems and logic, including player controllers, puzzle mechanics and combat systems.
- Miscellaneous: Version control with git, huge interest in SOLID principles, love for design patterns, very basic knowledge of GLSL, OpenGL and CUDA.
- Other: Agile methodologies, Gantt charts, UML, Trello.

EDUCATION

Rey Juan Carlos University, Madrid – Bachelor's Degree in Video Game design and development

SEPTEMBER 2018 - SEPTEMBER 2022

Obtained multiple distinctions in subjects about OOP in C++ and Javascript, 3D physics simulation in C# with Unity and multiplayer web games with Javascript and Java.

Thesis: Framework for inverse animation editing based on differentiable simulation.

EXPERIENCE

Rey Juan Carlos University, Madrid – Physics Research Assistant

OCTOBER 2021 -AUGUST 2022

- Successfully developed a proof of concept for a state-of-the-art method of parameter optimization for 3D cloth simulations.
- Developed an efficient differentiable physics simulation engine in C++ intended for different game engines such as Unity or Unreal.
- Worked remotely and efficiently managed my time while I was also studying.

Personal projects

SEPTEMBER 2018 - PRESENT

- Worked as part of a team on various academic projects and work-related activities.
- Proven ability to work as an artist, game designer and programmer.
- Competed in various game jams, always delivering exceptional products before the deadlines.
- Some examples are:
    - **Ruins of Light (2020):** Built an online multiplayer game for browsers, both the client in Javascript and the server in Java. Implemented all the main mechanics and designed some of the characters.
    - **Pond Platoon (2021):** Created procedurally generated worlds for a 3D tower defense game and implemented the enemies AI to navigate through them in Unity.
    - **Framework for inverse animation editing based on differentiable simulation (2022):** Implemented a physics engine in C++ and used numerical optimization to estimate simulation parameters with Python to then display the resulting simulation in Unity.